WHEELING ISLAND
HOTEL • CASINO • RACETRACK

December 28, 2016

Dept of Environmental Protection
Division of Air Quality
601 – 57th Street, SE
Charleston, WV 25304-2345

To Whom It May Concern:

Please find attached our **Application for General Permit Registration** for the three (03) Emergency Generators that we operate at Wheeling Island Gaming. Inc.

The check for the amount of $500.00 to cover the permit fees was sent separately, and I have been in contact with **Larry Bord.** Larry has confirmed that the Accounting Office has the check.

If you have any questions, or need any additional information, please contact me at (304) 231-1888 or by email at gisella@delawarenorth.com.

Sincerely,

Giorgio Isella
Senior Director of Operations

GI/cmr

Enclosures

cc: Kim Florence, President and General Manager

November 16, 2016

Bev McKeone
Program Manager, NSR Permitting
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street, SE,
Charleston, WV 25304

SUBJECT: Wheeling Island Resort – Wheeling Island, WV
General Permit for Emergency Generators, G60-C

Dear Ms. McKeone:

Wheeling Island Resort operates a hotel and casino entertainment facility in Wheeling Island, West Virginia. The facility operates and maintain three diesel-fired emergency generators for back-up power. Information and specifications on the three engines are provided in the attached application. The uncontrolled potential to emit for each engine would exceed six pounds per hour nitrogen oxides (NOx) so we are requesting a limitation of hours in accordance with the operation of the units. We generally operate the engines less than 500 hours per year.

Attached we are providing a general permit application, GP G60-C for the units. The units were manufactured prior to July 2005 so that the New Source Performance Standards under 40 CFR Part 60 (Subpart IIII) do not apply to the units. Similarly, the units are not subject to the RICE MACT under Part 63 (Subpart ZZZZ) since they are existing commercial emergency stationary RICE units located at an Area Source as per 40 CFR 63.6585(f)(2).

Wheeling Island Resort sincerely appreciates the DAQ's efforts in authorizing the general permit for the emergency generators at the site. If you have any questions or need additional information for the units please don't hesitate to call or email me at 304-xyz-abcd.
304 231 1888

Sincerely,

John
Site Contact/Manager

cc: Jim Lewis, Green Energy Initiatives
George Mesing, QSEM Solutions, Inc.

Table of Contents

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475 • www.dep.wv.gov/daq

APPLICATION FOR GENERAL PERMIT REGISTRATION

CONSTRUCT, MODIFY, RELOCATE OR ADMINISTRATIVELY UPDATE A STATIONARY SOURCE OF AIR POLLUTANTS

☐ CONSTRUCTION ☐ MODIFICATION ☐ RELOCATION ☐ CLASS I ADMINISTRATIVE UPDATE ☐ CLASS II ADMINISTRATIVE UPDATE

CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:

- ☐ G10-D – Coal Preparation and Handling
- ☐ G20-B – Hot Mix Asphalt
- ☐ G30-D – Natural Gas Compressor Stations
- ☐ G33-A – Spark Ignition Internal Combustion Engines
- ☐ G35-A – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit)
- ☐ G40-C – Nonmetallic Minerals Processing
- ☐ G50-B – Concrete Batch
- X G60-C - Class II Emergency Generator
- ☐ G65-C – Class I Emergency Generator
- ☐ G70-A – Class II Oil and Natural Gas Production Facility

SECTION I. GENERAL INFORMATION

1. Name of applicant (as registered with the WV Secretary of State's Office): Wheeling Island Hotel Casino Race Track

2. Federal Employer ID No. (FEIN):

3. Applicant's mailing address: 1 South Stone Street, Wheeling, WV 26003

4. Applicant's physical address: 1 South Stone Street, Wheeling, WV 26003

5. If applicant is a subsidiary corporation, please provide the name of parent corporation:

6. **WV BUSINESS REGISTRATION.** Is the applicant a resident of the State of West Virginia? X YES ☐ NO

- IF YES, provide a copy of the Certificate of **Incorporation/ Organization / Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- IF NO, provide a copy of the **Certificate of Authority / Authority of LLC / Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

SECTION II. FACILITY INFORMATION

7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.): Emergency generators at Entertainment Complex

8a. Standard Industrial Classification Classification (SIC) code: 7011

AND

8b. North American Industry System (NAICS) code: 721120

9. DAQ Plant ID No. (for existing facilities only): ___ ___ ___ - ___ ___ ___ ___ ___

10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only): None

RECEIVED
DEC 29 2016
WV DEP / DIV OF AIR QUALITY

A: PRIMARY OPERATING SITE INFORMATION

11A. Facility name of primary operating site:	12A. Address of primary operating site:
Wheeling Island Hotel Casino Race Track	Mailing: 1 South Stone Street Wheeling, WV 26003 Physical: 1 South Stone Street Wheeling, WV 26003

13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? X YES ☐ NO

- IF YES, please explain: _____
- IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.

14A. - For **Modifications or Administrative Updates** at an existing facility, please provide directions to the present location of the facility from the nearest state road;

- For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a **MAP as Attachment F.**

Interstate 70 to Exit 0, left onto South York Street to Wheeling Island Hotel-Casino-Racetrack

15A. Nearest city or town:	16A. County:	17A. UTM Coordinates:
Wheeling	Ohio	Northing (KM): 4435627.30 Easting (KM): 522759.04 Zone: 17T

18A. Briefly describe the proposed new operation or change (s) to the facility:	19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits):
Registration of existing emergency generators	Latitude: 40.0706 Longitude: -80.7331

B: 1ST ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits)

11B. Name of 1st alternate operating site:	12B. Address of 1st alternate operating site:
N/A	Mailing: _____ Physical: _____

13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? ☐ YES ☐ NO

- IF YES, please explain: _____
- IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.

14B. – For **Modifications or Administrative Updates** at an existing facility, please provide directions to the present location of the facility from the nearest state road;

– For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a **MAP as Attachment F.**

15B. Nearest city or town:	16B. County:	17B. UTM Coordinates: Northing (KM): Easting (KM): Zone:
18B. Briefly describe the proposed new operation or change (s) to the facility:		19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: Longitude:

C: 2nd ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits):

11C. Name of 2nd alternate operating site:	12C. Address of 2nd alternate operating site:
N/A	Mailing: Physical:

13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? ☐ YES ☐ NO

– IF YES, please explain:

– IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.

14C. – For **Modifications or Administrative Updates** at an existing facility, please provide directions to the present location of the facility from the nearest state road;

– For Construction or Relocation permits, please provide directions to the proposed new site location from the nearest state road. Include a **MAP as Attachment F.**

15C. Nearest city or town:	16C. County:	17C. UTM Coordinates: Northing (KM): Easting (KM): Zone:
18C. Briefly describe the proposed new operation or change (s) to the facility:		19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: Longitude:

20. Provide the date of anticipated installation or change: ____/____/____ ☐ If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: : ____/____/____	21. Date of anticipated Start-up if registration is granted: ____/____/____

22. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application if other than 8760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation).

Hours per day_____ Days per week _____ Weeks per year _____ Percentage of operation _____

SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

23. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

24. Include a **Table of Contents** as the first page of your application package.

All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone.

25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below.

- X ATTACHMENT A : CURRENT BUSINESS CERTIFICATE
- X ATTACHMENT B: PROCESS DESCRIPTION
- ☐ ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS
- X ATTACHMENT D: PROCESS FLOW DIAGRAM
- X ATTACHMENT E: PLOT PLAN
- X ATTACHMENT F: AREA MAP
- X ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM
- ☐ ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS
- X ATTACHMENT I: EMISSIONS CALCULATIONS
- X ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT
- ☐ ATTACHMENT K: ELECTRONIC SUBMITTAL
- X ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE
- ☐ ATTACHMENT M: SITING CRITERIA WAIVER
- ☐ ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS)
- ☐ ATTACHMENT O: EMISSIONS SUMMARY SHEETS
- X OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.)

Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please DO NOT fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.

SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

☒ I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation

FOR A PARTNERSHIP

☐ I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

☐ I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

☐ I certify that I am the President or a member of the Board of Directors

FOR A JOINT VENTURE

☐ I certify that I am the President, General Partner or General Manager

FOR A SOLE PROPRIETORSHIP

☐ I certify that I am the Owner and Proprietor

☐ *I hereby certify that* (please print or type) _____

is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or,

I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible

Signature _____ 11/20/16
(please use blue ink) Responsible Official Date

Name & Title Kim Florence President + General Manager
(please print or type)

Signature _____ 11/20/16
(please use blue ink) Authorized Representative (if applicable) Date

Applicant's Name Wheeling Island Gaming, Inc.

Phone & Fax 304-232-5050 304 231 1842
Phone Fax

Email kflorence@delawarenorth.com

Wheeling
WEST VIRGINIA

CITY OF WHEELING
1500 CHAPLINE STREET ROOM 115
WHEELING, WV 26003-3553
QUESTIONS-INQUIRIES (304)234-3653
OFFICE HOURS: MONDAY THRU FRIDAY 8:30 to 5:00

CITY OF WHEELING - BUSINESS LICENSE

NO. 198713

ACCOUNT# 198713
WDRA FOOD SERVICE IN
WHEELING ISLAND GAMING INC
KARELL A MENDEZ
LICENSING DIVISION
40 FOUNTAIN PLAZA
BUFFALO NY 14202

Effective Date: 07/01/2016

Expiration Date: 06/30/2017
Business Address:
1 SOUTH STONE ST

THE CITY OF WHEELING HAS AUTHORIZED AND GRANTED A LICENSE TO ENGAGE IN, CONDUCT OR OPERATE THE BUSINESS OR PROFESSION IN A MANNER AS LISTED, UNDER **"TYPE OF BUSINESS ACTIVITIES AUTHORIZED UNDER LICENSE."**

IF A CHANGE OR ADDITION IN THE TYPE OF BUSINESS ACTIVITY OCCURS, OR IF YOU RELOCATE, OR IF YOU CLOSE YOUR BUSINESS, YOU MUST AMEND YOUR LICENSE BY NOTIFYING THE CITY,

BELOW IS YOUR CITY OF WHEELING BUSINESS LICENSE WHICH YOU SHOULD TEAR OFF AND DISPLAY

CITY OF WHEELING BUSINESS LICENSE

1500 Chapline Street, Room 115, Wheeling, WV 26003-3553

NO. 198713

Effective Date: 07/01/2016

Expiration Date: 06/30/2017
Business Address:
1 SOUTH STONE ST

This is to certify that the undersigned, in pursuance of the authority vested in him by law has this day granted to the below a license to engage in, conduct, or operate the business of, or devices for which license tax has been assessed and paid as shown in license schedule herein.

Wheeling
WEST VIRGINIA

ACCOUNT# 198713
WDRA FOOD SERVICE IN
WHEELING ISLAND GAMING INC
KARELL A MENDEZ
LICENSING DIVISION
40 FOUNTAIN PLAZA
BUFFALO NY 14202

Type of Business Activities Authorized Under License	Fee
PRIVATE CLUBS > 1,000 MEMBERS	1,250.00

Total License Fee	1,250.00
Past Due	0.00
Penalty	0.00
TOTAL PAID	1,250.00

Robert Hu
Licensing Officer

Attachment A:

Current Business Certificate

Attachment B:

Process Description

Attachment B – Process Description

The Wheeling Island Hotel Casino Racetrack is a hotel facility with attached casino. As per our facility's website:

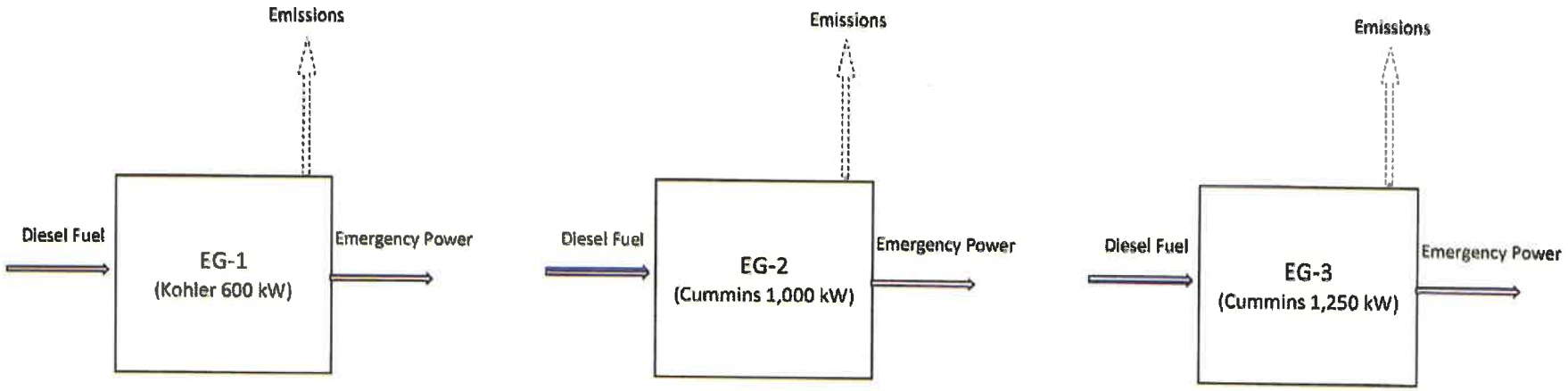
> "Wheeling Island is the place for non-stop excitement that extends beyond entertainment and into our diverse dining options that are sure to keep you coming back for more. The resort also features live Greyhound racing, making it your best bet for heart-pounding action. The Wheeling Island Players Club even enables you to earn points and rewards regardless of how you choose to play. So, plan your weekend at Wheeling Island today. Your greatest gaming adventure awaits you!"

The three emergency generators (EG-1, EG-2, & EG-3) provide electrical power to the facility casino, hotel, and racetrack in the event of a power outage. These generators are powered by diesel fuel. Typically, with the exception of periodic testing to ensure the generators operate correctly, the generators only run during emergency (power outage) situations.

Attachment D:

Process Flow Diagram

Attachment D

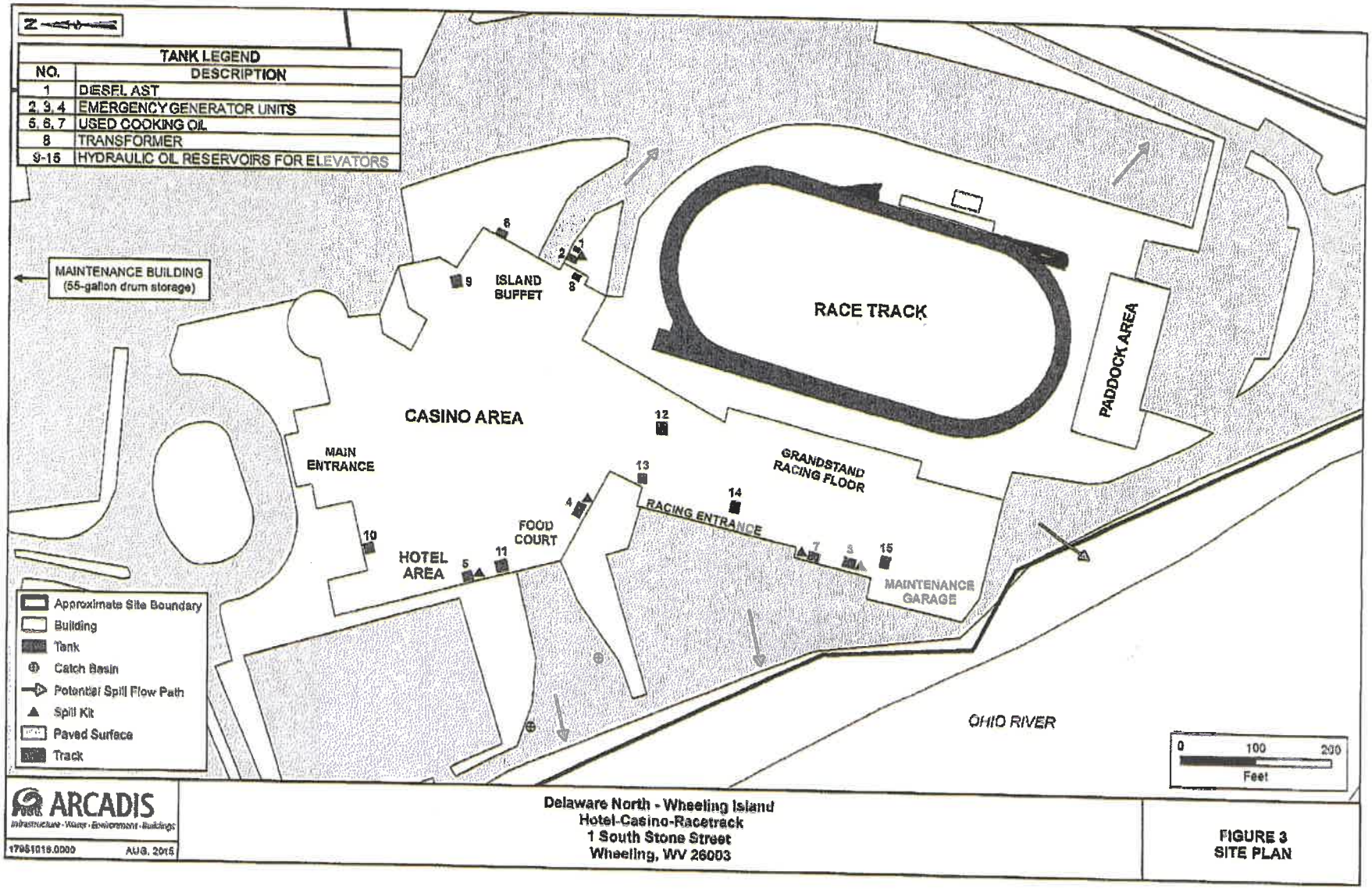


Utility Flow
Material Flow
Emissions Flow

TITLE: Process Flow Diagram			
Wheeling Island Hotel Casino Racetrack Wheeling, West Virginia			
PREPARED BY: QSEM SOLUTIONS, INC.			
DATE: September 2016			
PROJECT 2053.012.00	DRAWING PFD 001	SHEET 1 OF 1	REV 001

Attachment E:

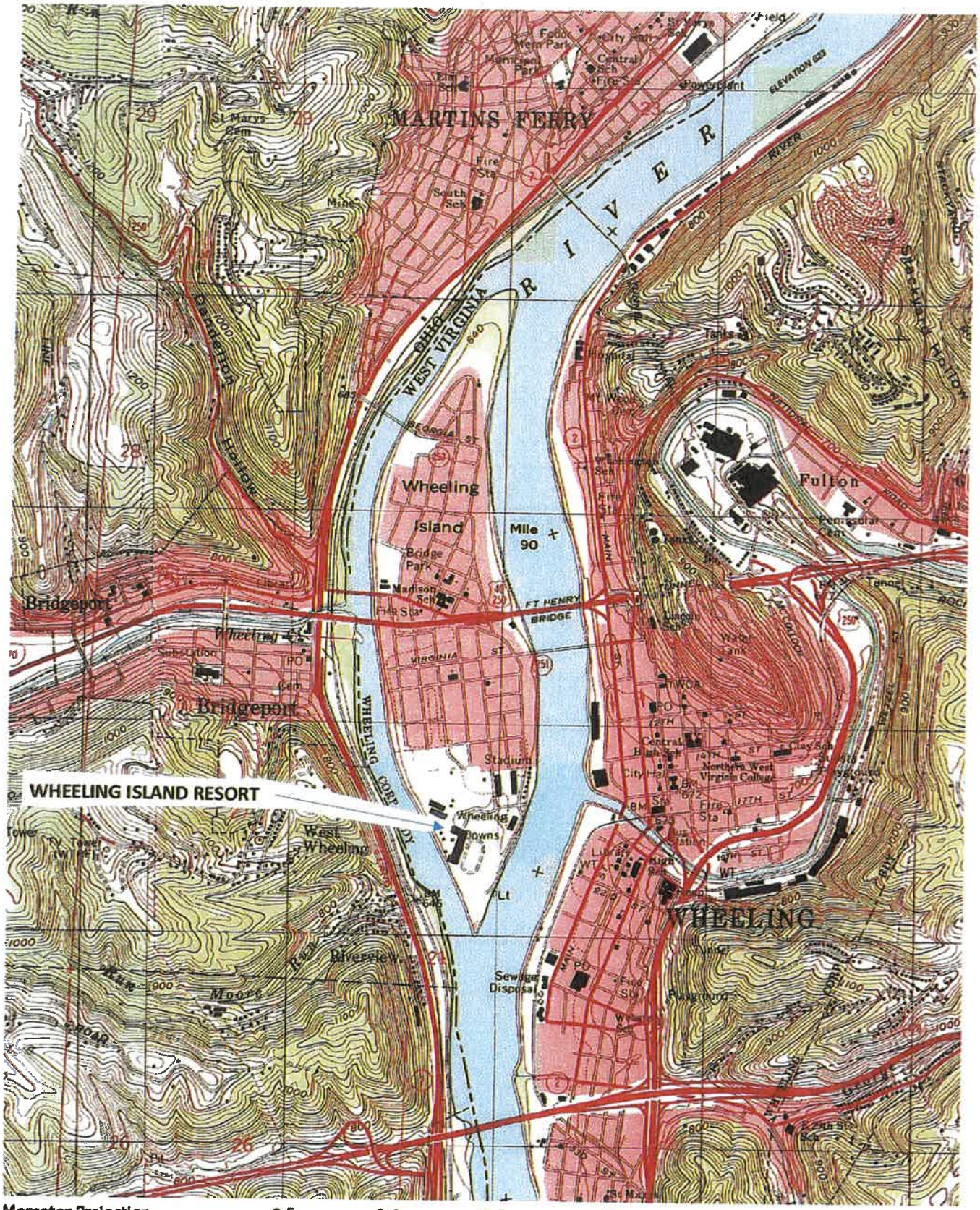
Plot Plan


N
TANK LEGEND
NO. | DESCRIPTION
1 | DIESEL AST
2, 3, 4 | EMERGENCY GENERATOR UNITS
5, 6, 7 | USED COOKING OIL
8 | TRANSFORMER
9-15 | HYDRAULIC OIL RESERVOIRS FOR ELEVATORS
MAINTENANCE BUILDING (55-gallon drum storage)
ISLAND BUFFET
RACE TRACK
PADDOCK AREA
CASINO AREA
MAIN ENTRANCE
GRANDSTAND RACING FLOOR
RACING ENTRANCE
FOOD COURT
HOTEL AREA
MAINTENANCE GARAGE
OHIO RIVER
Approximate Site Boundary
Building
Tank
Catch Basin
Potential Spill Flow Path
Spill Kit
Paved Surface
Track
0 100 200
Feet
ARCADIS
Infrastructure · Water · Environment · Buildings
17951019.0000 AUG. 2015
Delaware North - Wheeling Island
Hotel-Casino-Racetrack
1 South Stone Street
Wheeling, WV 26003
FIGURE 3
SITE PLAN

Attachment F:

Area Map

ATTACHMENT F – AREA MAP



Attachment G:

Affected Source Sheets

G60-C REGISTRATION APPLICATION FORMS

General Permit G60-C Registration
Section Applicability Form

General Permit G60-C was developed to allow qualified registrants to seek registration for emergency generator(s).

General Permit G60-C allows the registrant to choose which sections of the permit that they wish to seek registration under. Therefore, please mark which sections that you are applying for registration under. Please keep in mind, that if this registration is approved, the issued registration will state which sections will apply to your affected facility.

Section 5	Reciprocating Internal Combustion Engines (R.I.C.E.)*	☒
Section 6	Tanks	☒
Section 7	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII)	☐
Section 8	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ)	☐

* **Affected facilities that are subject to Section 5 may also be subject to Sections 7 or 8. Therefore, if the applicant is seeking registration under both sections, please select both.**

EMERGENCY GENERATOR ENGINE DATA SHEET

Source Identification Number[1]		EG-1 (internal)		EG-2		EG-3	
Engine Manufacturer and Model		Kohler 600kW/ROZD71		Cummins 1,000 kW/QST30-G5		Cummins 1,250 kW/1250DFCL	
Manufacturer's Rated bhp/rpm		903 bhp		1,490 bhp		1,850 bhp	
Source Status[2]		ES		ES		ES	
Date Installed/Modified/Removed[3]		c. 1995		c. 2003		c. 2003	
Engine Manufactured/Reconstruction Date[4]		1995		2003		2003	
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart IIII? (Yes or No)[5]		No		No		No	
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No)[6]		No		No		No	
Engine, Fuel and Combustion Data	Engine Type[7]	RB4S		RB4S		RB4S	
	APCD Type[8]	None		None		None	
	Fuel Type[9]	2FO		2FO		2FO	
	H_2S (gr/100 scf)	15-500 ppm as available		15-500 ppm as available		15-500 ppm as available	
	Operating bhp/rpm	900 bhp		1,308 bhp		1,635 bhp	
	BSFC (Btu/bhp-hr)	7,000		7,000		7,000	
	Fuel throughput (GPH)	55.5		72.7		87.3	
	Fuel throughput (GPY)	700		880		1,100	
	Operation (hrs/yr)	<500		<500		<500	
Reference[10]	Potential Emissions[11]	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
AP							
PLEASE SEE ATTACHMENT I EMISSIONS CALCULATIONS – based on AP-42 factors from Table 3.4-1.							

1. Enter the appropriate Source Identification Number for each emergency generator. Generator engines should be designated EG-1, EG-2, EG-3 etc. If more than three (3) engines exist, please use additional sheets.

2. Enter the Source Status using the following codes:

NS	Construction of New Source (installation)	ES	Existing Source
MS	Modification of Existing Source	RS	Removal of Source

3. Enter the date (or anticipated date) of the engine's installation (construction of source), modification or removal.

4. Enter the date that the engine was manufactured, modified or reconstructed.

5. Is the engine a certified stationary spark ignition internal combustion engine according to 40CFR60 Subpart IIII. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4210 as appropriate. **NO, THE ICE'S ARE NOT SUBJECT TO SUBPARTS JJJJ AND IIII SINCE THEY WERE MANUFACTURED AND INSTALLED PRIOR TO 2005.**

   Provide a manufacturer's data sheet for all engines being registered.

6. Is the engine a certified stationary spark ignition internal combustion engine according to 40CFR60 Subpart JJJJ. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4243a(2)(i) through (iii), as appropriate. **NO, THE ICE'S ARE NOT SUBJECT TO SUBPARTS JJJJ AND IIII SINCE THEY WERE MANUFACTURED AND INSTALLED PRIOR TO 2005.**

   Provide a manufacturer's data sheet for all engines being registered.

7. Enter the Engine Type designation(s) using the following codes:

LB2S	Lean Burn Two Stroke	RB4S	Rich Burn Four Stroke
LB4S	Lean Burn Four Stroke		

8. Enter the Air Pollution Control Device (APCD) type designation(s) using the following codes:

A/F	Air/Fuel Ratio	IR	Ignition Retard
HEIS	High Energy Ignition System	SIPC	Screw-in Precombustion Chambers
PSC	Prestratified Charge	LEC	Low Emission Combustion
NSCR	Rich Burn & Non-Selective Catalytic Reduction	SCR	Lean Burn & Selective Catalytic Reduction

9. Enter the Fuel Type using the following codes:

PQ	Pipeline Quality Natural Gas	RG	Raw Natural Gas
2FO	#2 Fuel Oil	LPG	Liquid Propane Gas

10. Enter the Potential Emissions Data Reference designation using the following codes. Attach all referenced data to this *Compressor/Generator Data Sheet(s)*.

MD	Manufacturer's Data	AP	AP-42	
GR	GRI-HAPCalc™	OT	Other _____	(please list)

11. Enter each engine's Potential to Emit (PTE) for the listed regulated pollutants in pounds per hour and tons per year. PTE shall be calculated at manufacturer's rated brake horsepower and may reflect reduction efficiencies of listed Air Pollution Control Devices. Emergency generator engines may use 500 hours of operation when calculating PTE. PTE data from this data sheet shall be incorporated in the *Emissions Summary Sheet*.

STORAGE TANK DATA SHEET

Source ID #[1]	Status[2]	Content[3]	Volume[4]	Dia[5]	Throughput[6]	Orientation[7]	Liquid Height[8]
T01	EXIST	Diesel fuel	1,000	4	700	HORZ	2
T02	EXIST	Diesel fuel	1,800	5.25	880	HORZ	2.5
T03	EXIST	Diesel fuel	1,000	4	1,100	HORZ	2

1. Enter the appropriate Source Identification Numbers (Source ID #) for each storage tank located at the compressor station. Tanks should be designated T01, T02, T03, etc.
2. Enter storage tank Status using the following:

   EXIST Existing Equipment
   NEW Installation of New Equipment
   REM Equipment Removed
3. Enter storage tank content such as condensate, pipeline liquids, glycol (DEG or TEG), lube oil, etc.
4. Enter storage tank volume in gallons.
5. Enter storage tank diameter in feet.
6. Enter storage tank throughput in gallons per year.
7. Enter storage tank orientation using the following:

   VERT Vertical Tank
   HORZ Horizontal Tank
8. Enter storage tank average liquid height in feet.

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR CRITERIA POLLUTANTS

Emergency Generator Location:						Registration Number (Agency Use) G60-C				
	Potential Emissions (lbs/hr)					Potential Emissions (tons/yr)				
Source ID No.	NO_X	CO	VOC	SO_2	PM_{10}	NO_X	CO	VOC	SO_2	PM_{10}
EG-1										
EG-2	PLEASE SEE ATTACHMENT I EMISSIONS CALCULATIONS – based on AP-42 factors from Table 3.4-1.									
EG-3										

EMERGENCY GENERATOR EMISSION SUMMARY SHEET FOR HAZARDOUS/TOXIC POLLUTANTS

Emergency Generator Location:							Registration Number (Agency Use) G60-C					
	Potential Emissions (lbs/hr)						Potential Emissions (tons/yr)					
Source ID No.	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formalde-hyde	Benzene	Ethyl-benzene	Toluene	Xylenes	n-Hexane	Formalde-hyde
	PLEASE SEE ATTACHMENT I EMISSIONS CALCULATIONS – based on AP-42 factors from Table 3.4-1.											
Total												

General Permit Levels
Construction, Modification, Relocation, Administrative Update

Class II General Permits – G10-C (Coal Preparation and Handling), G20-B (Hot Mix Asphalt), G30-D (Natural Gas Compressor Stations), G35-A (Natural Gas Compressor Stations with Flares/Glycol Dehydration Units), G40-B (Nonmetallic Minerals Processing), G50-B (Concrete Batch Plant), G60-C (Emergency Generators)

Class I General Permit - G65-C (Emergency Generators)

General Permit	Public Notice	Review Period as per 45CSR13	Application Fee	Criteria	Application Type
Class II General Permit (Construction)	30 days (applicant)	90 days	$500 + applicable NSPS fees	6 lb/hr and 10 tpy of any regulated air pollutant OR 144 lb/day of any regulated air pollutant, OR 2 lb/hr of any hazardous air pollutant OR 5 tpy of aggregated HAP OR 45CSR27 TAP (10% increase if above BAT triggers or increase to BAT triggers) or subject to applicable standard or rule, but subject to specific eligibility requirements	Registration Application
Class II General Permit (Modification)	30 days (applicant)	90 days	$500 + applicable NSPS fees	Same as Class II General Permit (Construction) but subject to specific eligibility requirements	Registration Application
Administrative Update (Class I)	None	60 days	None	Decrease in emissions or permanent removal of equipment OR more stringent requirements or change in MRR that is equivalent or superior	Registration Application or Written Request
Administrative Update (Class II)	30 days (applicant)	60 days	$300 + applicable NSPS fees	No change in emissions or an increase less than Class II Modification levels	Registration Application
Relocation	30 days (applicant)	45 days	$500 + applicable NSPS fees	No emissions increase or change in facility design or equipment	Registration Application
Class I General Permit	None	45 days	$250	Same as Class II General Permit (Construction) but subject to specific eligibility requirements	Registration Application

Attachment I:

Emissions Calculations

Wheeling Island Resort
September 2016
POTENTIAL TO EMIT [1]

All units are for emergency use only, back-up units.

Source	Engine Rating (kW)	Potential Hours Per Yr	HP Rating	Btu Rating MMbtu/hr	Fuel Type Activity Units	Activity Fuel Type	NOx Factor (lb/unit)	NOx (lb/hr)	NOx (ton/yr)	CO factor (lb/unit)	CO (lb/hr)	CO (ton/yr)	PM Factor (lb/unit)	PM (lb/hr)	PM (ton/yr)	VOC Factor (lb/unit)	VOC (lb/hr)	VOC (ton/yr)	SOx factor [2] (lb/unit)	SOx (lb/hr)	SOx (ton/yr)	Formaldehyde Factor (lb/unit)	Formaldehyde (lb/hr)	Formaldehyde (ton/yr)
Internal Combustion Engines - Diesel Fuel-fired Units (Compression ignition)																								
EG-1	600	500	903	2.0	MMBtu	oil	3.20	6.40	1.60	0.85	1.70	0.43	0.100	0.20	0.05	0.09	0.18	0.05	0.51	1.01	0.25	0.0000789	0.0002	0.0000
EG-2	1000	500	1490	3.4	MMBtu	oil	3.20	10.88	2.72	0.85	2.89	0.72	0.100	0.34	0.09	0.09	0.31	0.08	0.51	1.72	0.43	0.0000789	0.0003	0.000
EG-3	1250	500	1850	4.3	MMBtu	oil	3.20	13.76	3.44	0.85	3.66	0.91	0.100	0.43	0.11	0.09	0.39	0.10	0.51	2.17	0.54	0.0000789	0.0003	0.000
TOTAL									7.76			2.06			0.24			0.22			1.22			0.00019

(1) Emissions from these engines are based on AP-42 emission factors for Large Internal Combustion Engines (Section 3.4) Table 3.4-1 (>600 hp).

(2) SO2 factor assumes 0.5% Sulfur diesel fuel.

Intelligencer & News-Register Legals Print Ad Proof

ADNo: 235941 Customer Number:
Customer Name: Company: QSEM SOLUTIONS, INC.
Address: 347 THIRD STREET BEA
City/St/Zip: BEAVER ,PA 15009
Phone: (724) 709-7299 Solicitor: LE
Category: 10 Class: 1000 Rate: L-0 Start: 11-23-2016 Stop: 11-23-2016
Lines: 59 Inches: 5.74 Words: 187

Credit Card: Expire:
Order Number:
Cost: 31.12 Extra Charges: 2.00 Adjustments: .00
Payments: .00 Discount: .00
Balance: 33.12

AIR QUALITY PERMIT NOTICE

Notice of Application

Notice is given that Wheeling Island Resort has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a General Permit, G60-C Construction permit to incorporate three emergency generators located at 1 South Stone Street, Wheeling Ohio County, West Virginia. The UTM coordinates are: UTM Easting 522759.04 km; UTM Northing 4435627.30 km in Zone 17T.

The applicant estimates no increase in potential to discharge Regulated Air Pollutants. Potential emissions of each criteria pollutant and HAP will be less than 8 tons per year.

This is for existing emergency generators. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.
Dated this the 21st day of November, 2016.

By: Wheeling Island Resort LLC
Giorgio Isella
1 South Stone Street
Wheeling, Ohio County, West Virginia
Int. Nov. 23, 2016

Attachment J:

Class I Legal Advertisement

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Wheeling Island Resort has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a General Permit, G60-C Construction permit to incorporate three emergency generators located at 1 South Stone Street, Wheeling Ohio County, West Virginia. The UTM coordinates are: UTM Easting 522759.04 km; UTM Northing 4435627.30 km in Zone 17T.

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Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.
Dated this the 17th day of November, 2017.

By: Wheeling Island Resort LLC
CONTACT NAME
1 South Stone Street
Wheeling Ohio County, West Virginia

Attachment L:

General Permit Registration Application Fee

Other Supporting Documentation

Engine Manufactures Specifications

E6-1

Model: 600REOZVB

KOHLER. Power Systems

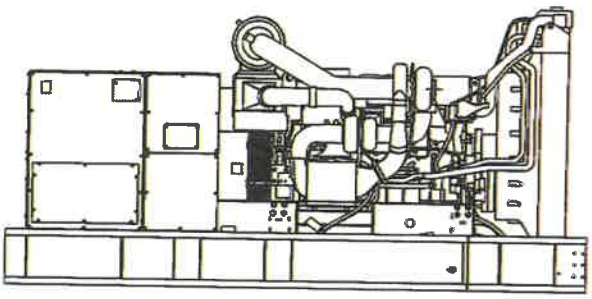
208-600 V | Diesel

ISO 9001 KOHLER POWER SYSTEMS NATIONALLY REGISTERED

Tier 2 EPA-Certified for Stationary Emergency Applications

Ratings Range

		60 Hz
Standby:	kW	485-600
	kVA	606-750
Prime:	kW	485-555
	kVA	606-694



Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- A standard one-year limited warranty covers all systems and components. Two-, five-, and ten-year extended warranties are also available.
- Alternator features:
  - The pilot-excited, permanent magnet (PM) alternator provides superior short-circuit capability.
  - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
  - Kohler designed controllers for guaranteed system integration and remote communication. See Controllers on page 3.
  - The low coolant level shutdown prevents overheating (standard on radiator models only).
  - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.
  - An electronic, isochronous governor delivers precise frequency regulation.
  - Multiple circuit breaker configurations.

Generator Set Ratings

				150°C Rise Standby Rating		130°C Rise Standby Rating		125°C Rise Prime Rating		105°C Rise Prime Rating	
Alternator	Voltage	Ph	Hz	kW/kVA	Amps	kW/kVA	Amps	kW/kVA	Amps	kW/kVA	Amps
5M4030	120/208	3	60	600/750	2082	565/706	1960	550/688	1908	525/656	1822
	127/220	3	60	600/750	1968	590/738	1935	550/688	1804	545/681	1788
	139/240	3	60	600/750	1804	600/750	1804	550/688	1654	550/688	1654
	220/380	3	60	485/606	921	485/606	921	485/606	921	485/606	921
	240/416	3	60	600/750	1041	565/706	980	550/688	954	525/656	911
	277/480	3	60	600/750	902	600/750	902	550/688	827	550/688	827
5M4032	120/208	3	60	600/750	2082	600/750	2082	555/694	1926	555/694	1926
	127/220	3	60	600/750	1968	600/750	1968	555/694	1821	555/694	1821
	139/240	3	60	600/750	1804	600/750	1804	555/694	1669	555/694	1669
	220/380	3	60	595/744	1130	595/744	1130	555/694	1054	555/694	1054
	240/416	3	60	600/750	1041	600/750	1041	555/694	963	555/694	963
	277/480	3	60	600/750	902	600/750	902	555/694	834	555/694	834
5M4164	220/380	3	60	600/750	1140	600/750	1140	550/688	1045	550/688	1045
5M4272	347/600	3	60	600/750	722	600/750	722	550/688	662	550/688	662
5M4276	347/600	3	60	600/750	722	600/750	722	555/694	668	555/694	668

RATINGS: All three-phase units are rated at 0.8 power factor. *Standby Ratings:* The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. *Prime Power Ratings:* At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

Alternator Specifications

Specifications		Alternator
Type		4-Pole, Rotating-Field
Exciter type		Brushless, Permanent-Magnet Pilot Exciter
Leads: quantity, type		10, Reconnectable
Voltage regulator		Solid State, Volts/Hz
Insulation:		NEMA MG1
Material		Class H, Synthetic, Nonhygroscopic
Temperature rise		130°C, 150°C Standby
Bearing: quantity, type		1, Sealed
Coupling		Flexible Disc
Amortisseur windings		Full
Rotor balancing		125%
Voltage regulation, no-load to full-load		Controller Dependent
One-step load acceptance		100% of Rating
Unbalanced load capability		100% of Rated Standby Current
Peak motor starting kVA:		(35% dip for voltages below)
480 V	5M4030 (10 lead)	1775
480 V	5M4032 (10 lead)	2200
380 V	5M4164 (4 lead)	2300
600 V	5M4272 (4 lead)	1750
600 V	5M4276 (4 lead)	2800

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Superior voltage waveform from two-thirds pitch windings and skewed stator.
- Digital solid-state, volts-per-hertz voltage regulator with ±0.25% no-load to full-load regulation.
- Brushless alternator with brushless pilot exciter for excellent load response.

Application Data

Engine

Engine Specifications	
Manufacturer	Volvo
Engine model	TWD1643GE
Engine type	4-Cycle, Turbocharged, Charge Air-Cooled
Cylinder arrangement	6 Inline
Displacement, L (cu. in.)	16.12 (984)
Bore and stroke, mm (in.)	144 x 165 (5.67 x 6.50)
Compression ratio	16.5:1
Piston speed, m/min. (ft./min.)	594 (1949)
Main bearings: quantity, type	7, Precision Half-Shell
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	674 (903)
Cylinder head material	Cast Iron
Piston: type, material	Swirl Chamber, Graphite-Coated Aluminum
Crankshaft material	Forged Steel
Valve material	Nimonic
Governor type	EMS II
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state	±0.25%
Frequency	Fixed
Air cleaner type, all models	Dry

Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust flow at rated kW, m^3/min. (cfm)	130 (4594)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	461 (862)
Maximum allowable back pressure, kPa (in. Hg)	10 (2.95)
Exhaust outlet size at engine hookup, mm (in.)	See ADV drawing

Engine Electrical

Engine Electrical System	
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	24
Ampere rating	80
Starter motor rated voltage (DC)	24
Battery, recommended cold cranking amps (CCA):	
Quantity, CCA rating each	Two, 950
Battery voltage (DC)	12

Fuel

Fuel System	
Fuel supply line, min. ID, mm (in.)	10 (0.38)
Fuel return line, min. ID, mm (in.)	6 (0.25)
Max. fuel flow, Lph (gph)	210 (55.5)
Max. fuel pump restriction, kPa (in. Hg)	10 (3.0)
Max. return line restriction, kPA (in. Hg)	20 (5.9)
Fuel filter: quantity, type	2, Primary, 10 Micron/ Secondary w/Water Separator, 3 Microns
Recommended fuel	#2 Diesel

Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.)	42.0 (44.4)
Oil pan capacity with filter, L (qt.)	48.1 (50.8)
Oil filter: quantity, type	3, Cartridge
Oil cooler	Water-Cooled

Application Data

Cooling

Radiator System	
Ambient temperature, °C (°F) *	50 (122)
Engine jacket water capacity, L (gal.)	33 (8.7)
Radiator system capacity, including engine, L (gal.)	62 (16.4)
Engine jacket water flow, Lpm (gpm)	360 (95.4)
Charge cooler water flow, Lpm (gpm)	96 (25.2)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	270 (15355)
Heat rejected to charge cooler water at rated kW, dry exhaust, kW (Btu/min.)	135 (7677)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	965 (38.0)
Fan, kWm (HP)	30 (41)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)

* Weather and sound enclosures with internal silencer and weather housing with external silencer reduce ambient temperature capability by 5°C (9°F).

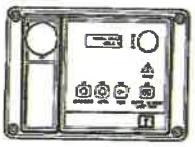
Operation Requirements

Air Requirements	
Radiator-cooled cooling air, m^3/min. (scfm)†	725 (25600)
Combustion air, m^3/min. (cfm)	55 (1937)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	33 (1877)
Alternator, kW (Btu/min.)	45 (2560)

† Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

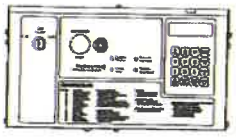
Fuel Consumption	
Diesel, Lph (gph) at % load	**Standby Rating**
100%	154.6 (40.8)
75%	112.5 (29.7)
50%	75.8 (20.0)
25%	41.7 (11.0)
Diesel, Lph (gph) at % load	**Prime Rating**
100%	139.0 (36.7)
75%	101.7 (26.9)
50%	69.2 (18.3)
25%	38.5 (10.2)

Controllers



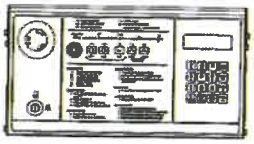
Decision-Maker® 3000 Controller
Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.
- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-100 for additional controller features and accessories.



Decision-Maker® 550 Controller
Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities.
- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or modem configuration
- Controller supports Modbus® protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-46 for additional controller features and accessories.



Decision-Maker® 6000 Paralleling Controller
Provides advanced control, system monitoring, and system diagnostics with remote monitoring capabilities for paralleling multiple generator sets.
- Paralleling capability with first-on logic, synchronizer, kW and kVAR load sharing, and protective relays
- Digital display and keypad provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or modem configuration
- Controller supports Modbus® protocol
- Integrated voltage regulator with ±0.25% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-107 for additional controller features and accessories.

KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444
KOHLERPower.com

Kohler Power Systems
Asia Pacific Headquarters
7 Jurong Pier Road
Singapore 619159
Phone (65) 6264-6422, Fax (65) 6264-6455

Standard Features

- Alternator Protection
- Battery Rack and Cables
- Customer Connection (standard with Decision-Maker® 6000 controller)
- Local Emergency Stop Switch
- Oil Drain Extension
- Operation and Installation Literature

Available Options

Approvals and Listings

- ☐ California OSHPD Approval
- ☐ CSA Approval
- ☐ IBC Seismic Certification
- ☐ UL 2200 Listing

Enclosed Unit

- ☐ Sound Enclosure/Tank Package
- ☐ Weather Enclosure/Tank Package

Open Unit

- ☐ Exhaust Silencer, Hospital (kit: PA-354907)
- ☐ Exhaust Silencer, Critical (kit: PA-354894)
- ☐ Flexible Exhaust Connector, Stainless Steel

Fuel System

- ☐ Flexible Fuel Lines, Rubber
- ☐ Flexible Fuel Lines, Stainless Steel
- ☐ Fuel Pressure Gauge

Controller

- ☐ Common Failure Relay (Decision-Maker® 550 and 6000 controllers only)
- ☐ Communications Products and PC Software
- ☐ Customer Connection (Decision-Maker® 550 controller only)
- ☐ Decision-Maker® Paralleling System (DPS) (Decision-Maker® 6000 controller only)
- ☐ Dry Contact (isolated alarm) (Decision-Maker® 550 and 6000 controllers only)
- ☐ Input/Output Module (Decision-Maker® 3000 controller only)
- ☐ Remote Audiovisual Alarm Panel (Decision-Maker® 550 controller only)
- ☐ Remote Emergency Stop
- ☐ Remote Mounting Cable
- ☐ Remote Serial Annunciator Panel
- ☐ Run Relay

Cooling System

- ☐ Block Heater, 4000 W, 190/208 V, 1 Ph
- ☐ Block Heater, 4000 W, 210/240 V, 1 Ph
- ☐ Block Heater, 4000 W, 380/480 V, 1 Ph Recommended for ambient temperatures below 20°C (68°F)
- ☐ Radiator Duct Flange

Electrical System

- ☐ Alternator Strip Heater
- ☐ Battery
- ☐ Battery Charger, Equalize/Float Type
- ☐ Battery Heater
- ☐ Bus Bar
- ☐ Line Circuit Breaker (NEMA type 1 enclosure)
- ☐ Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)

Paralleling System

- ☐ Manual Speed Adjust (Decision-Maker® 550 controller only)
- ☐ Remote Voltage Adjustment Control (Decision-Maker® 550 controller only)
- ☐ Voltage Sensing (Decision-Maker® 6000 controller only)

Miscellaneous

- ☐ Air Cleaner, Heavy Duty
- ☐ Air Cleaner Restriction Indicator
- ☐ Closed Crankcase Ventilation
- ☐ Engine Fluids (oil and coolant) Added
- ☐ Rated Power Factor Testing

Literature

- ☐ General Maintenance
- ☐ NFPA 110
- ☐ Overhaul
- ☐ Production

Warranty

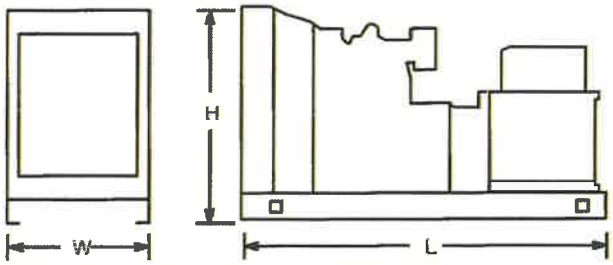
- ☐ 2-Year Basic
- ☐ 2-Year Prime
- ☐ 5-Year Basic
- ☐ 5-Year Comprehensive
- ☐ 10-Year Major Components

Other Options

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

Dimensions and Weights

Overall Size, L x W x H, max., mm (in.):	4229 x 1939 x 1973 (166.5 x 76.3 x 77.7)
Weight (radiator model), wet, max., kg (lb.):	4885 (10770)



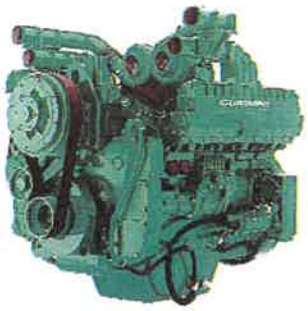
Note: This drawing is provided for reference only and should not be used for planning the installation. Contact your local distributor for more detailed information.

DISTRIBUTED BY:

EG-2

QST30-G5

Emissions Compliance:
EPA NSPS Stationary Emergency Tier 2



> Specification sheet

Our energy working for you.™

Description

The QST30 Quantum series utilises sophisticated electronics and premium engineering to provide outstanding performance levels from its compact 30 litre, V12 configuration. In fact, the QST30-Series delivers more power and torque in a smaller package than any other diesel engine on the market.

CE — This engine has been built to comply with CE certification.

ISO 9001 — This engine has been designed in facilities certified to ISO9001 and manufactured in facilities certified to ISO9001 or ISO9002.

Features

Quantum electronic fuel systems and controls provide superior performance, efficiency and diagnostics. The electronic fuel pumps deliver up to 1100 bar injection pressure and eliminate mechanical linkage adjustments.

CTT (Cummins Turbo Technologies) HX82 turbocharging utilises exhaust energy with greater efficiency for improved emissions and fuel consumption.

Charge Air Cooling – Utilizing an Air-to-Air heat exchanger or Charge-Air-Cooler (CAC) to reduce intake manifold temperature and to meet the lower emissions requirements.

Cast Iron Pistons – High strength design delivers superior durability.

Coolpac Integrated Design - Products are supplied complete with cooling package and air cleaner kit for a complete power package. Each component has been specifically developed and rigorously tested for G-Drive products, ensuring high performance, durability and reliability.

Service and Support - G-Drive products are backed by an uncompromising level of technical support and after sales service, delivered through a world class service network.

1800 rpm (60 Hz Ratings)

Gross Engine Output			Net Engine Output			Typical Generator Set Output					
Standby	Prime	Base	Standby	Prime	Base	Standby (ESP)		Prime (PRP)		Base (COP)	
kWm/BHP			kWm/BHP			kWe	kVA	kWe	kVA	kWe	kVA
1112/1490	1007/1350	832/1115	1069/1434	975/1308	800/1073	1000	1250	910	1138	752	940

Our energy working for you.™

www.cumminsgdrive.com

General Engine Data

Type	4 cycle, Turbocharged and After cooled
Bore mm	140
Stroke mm	165
Displacement Litre	30.5
Cylinder Block	Cast iron, 50°V 12 cylinder
Battery Charging Alternator	35A
Starting Voltage	24V
Fuel System	Direct injection
Fuel Filter	Spin on fuel filters with water separator
Lube Oil Filter Type(s)	Spin on full flow filter
Lube Oil Capacity (l)	40.7
Flywheel Dimensions	SAE 0

Coolpac Performance Data

Cooling System Design	Air-air charge cooled
Coolant Ratio	50% ethylene glycol; 50% water
Coolant Capacity (l)	202
Limiting Ambient Temp. (°C)**	50.0
Fan Power (kWm)	42.4
Cooling System Air Flow (m^3/s)**	16.0
Air Cleaner Type	Dry replaceable element with restriction indicator

** @ 13 mm H^2O

Ratings Definitions

Emergency Standby Power (ESP):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Limited-Time Running Power (LTP):
Applicable for supplying power to a constant electrical load for limited hours. Limited-Time Running Power (LTP) is in accordance with ISO 8528.

Prime Power (PRP):
Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046, AS 2789, DIN 6271 and BS 5514.

Base Load (Continuous) Power (COP):
Applicable for supplying power continuously to a constant electrical load for unlimited hours. Continuous Power (COP) in accordance with ISO 8528, ISO 3046, AS 2789, DIN6271 and BS 5514.

Weight & Dimensions

Length	Width	Height	Weight (dry)
mm	mm	mm	kg
2772	1752	2226	3822

Fuel Consumption 1800 rpm (60 Hz)

%	kWm	BHP	L/ph	US gal/ph
Standby Power				
100	1112	1490	275	72.7
Prime Power				
100	1007	1350	248	65.4
75	755	1013	185	48.8
50	504	675	126	33.1
25	252	338	69	18.2
Continuous Power				
100	832	1115	246	64.9

Cummins G-Drive Engines

Asia Pacific
10 Toh Guan Road
#07-01
TT International Tradepark
Singapore 608838
Phone 65 6417 2388
Fax 65 6417 2399

Europe, CIS, Middle East and Africa
Manston Park Columbus Ave
Manston Ramsgate
Kent CT12 5BF. UK
Phone 44 1843 255000
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(01/08) (GDSS137-RevA)

Power Generation

Exhaust Emission Data Sheet

1250DFLC

60 Hz Diesel Generator Set

ENGINE

Model: Cummins KTA50-G3
Type: 4 Cycle, 60° V 16 Cylinder Diesel
Aspiration: Turbocharged and Aftercooled
Compression Ratio: 13.9:1
Emission Control Device: Turbocharged, Aftercooled and Step Timing Control (STC)

Bore: 6.25 in. (159 mm)
Stroke 6.25 in. (159 mm)
Displacement: 3067 cu. in. (50.2 liters)

PERFORMANCE DATA	STANDBY	PRIME
BHP @ 1800 RPM (60 Hz)	1850	1635
Fuel Consumption (gal/Hr)	87.3	76.9
Exhaust Gas Flow (CFM)	9100	8400
Exhaust Gas Temperature (°F)	887	860

EXHAUST EMISSION DATA

(All Values are Grams per HP-Hour)

COMPONENT	STANDBY	PRIME
HC (Total Unburned Hydrocarbons)	0.12	0.12
NOx (Oxides of Nitrogen as NO2)	12.70	11.30
CO (Carbon Monoxide)	1.00	0.80
PM (Particulate Matter)	0.06	0.07
SO_2 (Sulfur Dioxide)	0.59	0.59

TEST CONDITIONS

Data was recorded during steady-state rated engine speed (± 25 RPM) with full load (± 2%).
Pressures, temperatures, and emission rates were stablized.

Fuel Specification:	ASTM D975 No. 2-D diesel fuel with 0.03-0.05% sulfur content (by weight), and 40-48 cetane number.
Fuel Temperature:	99 ± 9 ° F (at fuel pump inlet)
Intake Air Temperature:	77 ± 9 ° F
Barometric Pressure:	29.6 ± 1 in. Hg
Humidity:	NOx measurement corrected to 75 grains H2O/lb dry air
Reference Standard:	ISO 8178

The NOx, HC, CO and PM emission data tabulated here were taken from a single engine under the test conditions shown above. Data for the other components are estimated. These data are subject to instrumentation and engine-to-engine variability. Field emissions test data are not guaranteed to these levels. Actual field test results may vary due to test site conditions, installation,fuel specification, test procedures and instrumentation. Engine operation with excessive air intake or exhaust restriction beyond published maximum limits, or with improper maintenance, may result in elevated emission levels.